

INDUSTRY QUESTIONS

3. On the telecommunication pathways the drawings shows only (2) conduits between each manhole. They are also indicating that only (1) cable be installed per conduit which will not leave any spare conduits for future growth. Should innerduct/maxcell be considered for this fiber application so that both 288 strand cables can be installed in (1) conduit and leave the other conduit as spare?

NASA RESPONSE: Construct as designed. One 288 strand cable is to be installed in each 4' conduit.

4. There are several locations along the cable route where the smaller fiber cables leaves the 288 cables and end in a designated building. There is no detailed route from the last manhole outside the building showing the pathways to the building or an approximate location of the buildings telecommunications room. Will there be other drawings with more details to follow soon?

NASA RESPONSE: The contractor is required to make terminations in buildings X-75 and V-62. Fiber to the remaining buildings shall end in the appropriate hand hole for each building with slack lengths as detailed in Attachment J, Communications - Fiber Optic Splice Schedule Rev A. Maps with hand hole locations and slack lengths titled - NORTH ISLAND HANDHOLE AND SPLICES, is incorporated as Attachment K via Amendment 2.

5. At the end of the cable run on drawing PE-18 what will the (2) 288 strand do? At this time it seems that they will be dead in the last manhole. Is there a final termination location for these two cables?

NASA RESPONSE: The 288 strand at the end of the cable run on drawing PE-18 is for future expansion/growth on north end of island. 288 strand cable #1 will be terminated in V-62. 288 strand cable #2 will be pulled through V-62 and run to last (far north) hand hole, leaving 500 ft of coiled slack. For 288 strand cable #2 – Strands 1-144 between V-62 and far north hand hole to be terminated in V-62. Strands 145-288 will be un-touched/not cut in V-62, and will have a direct connection to the terminated end in X-75. In the far north hand hole – strands 1-288 will be left un-terminated on the 500ft coil. Please note that there is an existing hand hole outside building V-62 where the two main 4" conduits from the south are to be brought into, and the two 4" conduits continuing north for future expansion are to be brought into.

Building V-62 is not called out on the original solicitation on page PE-15. A map with hand hole location titled - NORTH ISLAND HANDHOLE AND SPLICES is incorporated as Attachment K via Amendment 2.

6. Given the fact that NASA will not issue dig permits for any type of excavation during a launch window, can NASA provide a range of dates that launches are scheduled for the next year?

NASA RESPONSE: The number of launches is fluid and difficult to precisely determine. The outlook calendar shows launch windows that account for scrubbed launches and other airspace restricted activities that will not impact the construction schedule. For bid purposes, the bidding contractor shall allow for delays according to solicitation section H.10.4. Launch schedules will be communicated in advance by the Construction Manager.

7. Will the lost time, because of the no digging policy during launch windows be granted to end of the contract?

NASA RESPONSE: Solicitation part H.10.4 paragraph 3 allows for up to 2 hours, 3 days per week throughout the 365 day period of performance. The bidding contractor shall be aware of the possibility of down time associated with launch operations as stated above (up to 39 days for a 365 day period of performance). The bidding contractor shall be responsible for any additional time and costs associated with work restrictions up to 2 hours, 3 days per week throughout the 365 day period of performance. Any launch related delays beyond 39 days shall be considered government caused delays and an associated extension to the period of performance shall be granted.

8. Given the known policy of not crossing any road closures or barricades during a launch window, if the area of construction is not blocked off; can the contractors work during launches? If not, will the contractor need to send his employees off the island during launch windows?

NASA RESPONSE: Launch safe zones are specific to the type of launch vehicle. Some launches will require the closure of the causeway to Wallops Island. In some of these cases, the north portion of the island is outside the safe zone and work may continue as long as the workers remain outside the safe zone for the duration of the restriction. The COR will provide 24 hour advance notice per solicitation section H.10.4.

9. Transformer TR W-50 is not shown on drawing PE-4 but is shown on PCP-4. Is this an oversight?

NASA RESPONSE: The transformer is missing on sheet PE-4. The transformer is to be installed as shown on PCP-4.

10. Transformer TR W-50 shown only on PCP-4 is shown as new but not listed on the equipment list on drawing UD-7. Is this transformer existing, new or nonexistent?

NASA RESPONSE: See response to Question 9.

11. Switch S/S WI 18 is not clearly shown on the drawings but is listed on the one line. We assume that it is on drawing PE-8 North of Island Road and V-25. Please confirm.

NASA RESPONSE: Confirmed. The label for Switch S/S WI 18 is obscured by a line depicting a feeder on drawing PE-8.

12. Our company has supplied pre cast manholes and hand holes to this facility in the past. However, the drawings and specifications for this project are proprietary type showing specific products that are only manufactured by Old Castle Precast. Since these sizes are not “industry” standards, would a proposal for standard products that meet the specifications and design but may not be the exact size be considered at bid time?

NASA RESPONSE: The manufacturer and type shown in the drawing set is not intended to be the only manufacturer to meet the requirements for the project. All products proposed shall conform to the design and specifications.

13. Please confirm if the Contractor Quality Control Representative and Site Safety Health Officer can dual hat responsibilities.

NASA RESPONSE: Yes, one person may serve as both the Contractor Quality Control Representative and Site Safety Health Officer.

14. With the work being located in Virginia, Do we need any special licenses to do the work?

NASA RESPONSE: Work licensing and permits are the responsibility of the bidding contractor.

15. What will the permitted working hours be?

NASA RESPONSE: Project work hours are stated in clause H.10.4 of the solicitation.

16. Will there be a location on site to pull fresh water from for the directional drilling?

NASA RESPONSE: With approval from WFF Fire Department, proper backflow prevention and proper procedure has been arranged on previous project to allow contractors to fill tanks from selected fire hydrants.

17. How far from the work area will this water be?

NASA RESPONSE: The actual distance between the bore sites to the water is variable. The hydrant would have to be accessed using a tanker.

18. Will we be able to get rid of bore mud on site? If not, will we be able to dig a mud pit which we can then recycle the bore mud?

NASA RESPONSE: It is allowable to pile bore mud at site to dry and then haul to a site provided by Government. This site is on the island and we will locate for you.

19. If bore mud is recycled will we then be able to dispose of leftover water on site?

NASA RESPONSE: See response to Question 18.

20. Will we be able to dispose of dry dirt on site?

NASA RESPONSE: See response to Question 18.

21. What type of traffic control will be needed?

NASA RESPONSE: Traffic control will not be required to haul using dump trucks.

22. What is required for transiting from HDPE to PVC?

NASA RESPONSE: Bid project per design drawings and industry best practices. Construction methodology is the responsibility of the construction contractor.

23. Do you want us to provide pricing for any open trenching, or hand holes?

NASA RESPONSE: Bid project per design drawings.

24. How much of the work is under asphalt?

NASA RESPONSE: Refer to design drawings. Areas where conduit and cable enter under asphalt and concrete have been shown on the drawing sheets.

25. How much under concrete?

NASA RESPONSE: See response to question 24.

26. The drawings show concrete encasement from the hand holes to until passed the transition and until the pipe is at 72" deep would you be doing this or me?

**NASA RESPONSE: The contractor is responsible for doing this.**

27. Should the contractor anticipate any hazardous or contaminated soils? Please present as to how these materials will be handled and paid for.

**NASA RESPONSE: Hazardous or contaminated soils are not anticipated. If hazardous or contaminated soils are discovered notify the COR immediately.**

28. The PE# drawings show the fiber routes and only indicates one building being entered with Fiber, X-75. The remainder of the locations end at hand holes. Please clarify that cables are being left in hand holes and how much slack to leave in each hand hole.

**NASA RESPONSE: Each hand hole and man hole location should have slack to allow for splicing the main trunk to branch buildings. Fiber to the branch buildings shall end in the appropriate hand hole for each building with slack lengths as detailed in Attachment J, Communications - Fiber Optic Splice Schedule Rev A. Maps with hand hole locations and slack lengths titled - NORTH ISLAND HANDHOLE AND SPLICES is incorporated as Attachment K via Amendment 2.**

29. Drawing UD-6 Fiber Optic Single Line Drawings show 23 buildings for the fiber cable to be terminated. This drawing is not clear and building names are not legible. Can a clear Fiber Optic Single Line Drawing be released so a proper quote can be accomplished? Please clarify which buildings are required for fiber terminations.

**NASA RESPONSE: Terminations are only required in two buildings (X-75 and V-62). The fiber for the remaining 21 buildings is to be left coiled in the appropriate hand hole for that building. Each hand hole and man hole location should have slack to allow for splicing the main trunk to branch buildings. Fiber to the remaining buildings shall end in the appropriate hand hole for each building with slack lengths as detailed in Attachment J, Communications - Fiber Optic Splice Schedule Rev A. Maps with hand hole locations and slack lengths titled - NORTH ISLAND HANDHOLE AND SPLICES is incorporated as Attachment K via Amendment 2. An updated Fiber Optic Single Line Drawing "Fiber Optic Cable 1, Cable 2 Single Line Diagram" is incorporated as Attachment L via Amendment 2.**

30. The fiber optic schedule on Drawing UD-7 shows 23 buildings as end points for the fiber, but X-75 is not on the list and the route drawings do not show cable entering these buildings. The cable counts and fiber sizes do not match what is shown on the

PE drawings and buildings are listed in the schedule that do not appear on the PE drawings. Please explain this schedule and how it relates to this bid.

**NASA RESPONSE:** X-75 is not on the list is because X75 is receiving the actual trunk cable. (Trunk cables are the pair of 288 strand cables that will run between X-75 and V-62). The fiber optic splice schedule on page UD-7 is showing the branch cables that will be spliced directly into the 288 strand fiber “trunk” cables to feed the remaining 21 buildings. Table “Communications Fiber Optics Splice Schedule” on page UD-7 is correct. Attachments J, K & L are incorporated via Amendment 2. All circuit requirements that are required to be bid.

31. The Fiber Drawings (PE#) do not match the single line diagram on UD-6 or the splice schedule on UD-7. Please clarify which drawing set is correct. The PE Drawings shows: 1- 12 strand fiber cable, 1- 144 strand fiber cable, 6- 24 strand fiber cables, 3- 48 strand fiber cables, 2- 288 strand fiber cables. The single line diagram on UD-6 shows: 1- 144 strand fiber cable, 10- 24 strand fiber cables, 9- 48 strand fiber cables, 1- 72 strand fiber cable, 1- 4 strand fiber cable, 2- 288 strand fiber cables. The schedule on UD-7 shows: 1- 144 strand fiber cable, 12- 24 strand fiber cables, 9- 48 strand fiber cables, 1- 72 strand fiber cable, 2- 288 strand fiber cables.

**NASA RESPONSE:** The table “Communications Fiber Optics Splice Schedule” on page UD-7 is correct with the exception of V-62 being mislabeled as Z-62. The updated schedule titled - Communications - Fiber Optic Splice Schedule Rev A is incorporated as Attachment J via Amendment 2. An updated Fiber Optic Single Line Drawing “Fiber Optic Cable 1, Cable 2 Single Line Diagram” is incorporated as Attachment L via Amendment 2.

32. The Fiber Specifications SECTION 27 13 23.00 40 COMMUNICATIONS OPTICAL BACKBONE CABLING states at paragraph 1.5.1 Fiber Optic System, “System drawings shall show final configuration, including location, fiber pair count, pathway innerduct arrangement, and pathway assignment of outside plant.” Is Innerduct required on this project? If so: Does Wallops Island have a preference for Innerduct Type? Fabric or Pipe type? How many innerducts are required for each communication conduit? Is there a detail diagram showing the configuration?

**NASA RESPONSE:** Construct as designed. Two 4” conduits for main pathway and single 4” conduit for each branch/tail circuit feeding individual buildings is required. Please refer to Attachment K, NORTH ISLAND HANDHOLE AND SPLICES.

33. Drawing PE-2 shows a COM line at the bottom left of the page going up to a triangle building. This building is not identified and the call out for the COM cable is off of the page. Please inform as to what type cable is needed.

NASA RESPONSE: These are buildings X-81 and X-82. Both buildings are getting a 24 strand single mode cable per "Communications – Fiber Optic Splice Schedule" diagram on page UD-7.

34. SECTION 27 13 23.00 40, 2.7 FIBER OPTIC TERMINAL CABINETS indicates that cabinets are required, but there are no details on the drawings. Are cabinets existing?

NASA RESPONSE: All fiber optic cabinets will be provided by the government.

35. Fiber connector type is not specified. Please give the Fiber Connector type.

NASA RESPONSE: All fiber connectors shall be LC APC splice on connectors equal to AFL Part #FUSE-LC9SMA-6. Please note all fiber optic cabling and terminations for this project are single mode.

36. With the amount of clarifications that are needed for the Communications options, will a Bid Extension be issued?

NASA RESPONSE: Amendment 2 extends the deadline for receipt of bids.

37. SECTION 27 13 23.00 40; 2.1.3.12 Metallic Armor specifies, "Provide a metallic armor shield for direct buried cable for additional tensile strength, rodent protection, and high crush and moisture resistance." With the high expense of Armored Cable, can a non-armored cable be allowed to reduce the cost of this project?

NASA RESPONSE: Non armored cable is permitted. If a non armored cable or cable without metallic strength member is used, a separate piece of copper wire (12 AWG Copper or tracer tape for example) must be run with the fiber cable for locating purposes.

38. SECTION 27 13 23.00 40; 2.1.1.1 does not list performance specs for Single Mode Fiber Optic Cable. Multi-mode is listed but there is no Multi-Mode cable required for this project. Please provide performance requirements for Single Mode cable.

NASA RESPONSE: Propose Corning Single Mode (OS2 Altos Loose Tube Gell Free Cable), or equivalent cable that meets or exceeds the performance specifications. Corning Single Mode specifications is provided named - ALTOS All Dielectric Gel

Free SPECS, and can also be found here: [http://catalog.corning.com/opcomm/en-US/catalog/ProductDetails.aspx?cid=loose\\_tube\\_outdoor\\_cables\\_web&pid=8899&vid=8935](http://catalog.corning.com/opcomm/en-US/catalog/ProductDetails.aspx?cid=loose_tube_outdoor_cables_web&pid=8899&vid=8935)

39. During the site visit, we did not enter any buildings that are included in the fiber work. The specs state rack mount patch panels but in the building we entered (X-141), the fiber was mounted on a backboard. Please provide details for each building with regard to how the fiber hardware will be mounted.

NASA RESPONSE: Buildings X-75 and V-62 are the only buildings where fiber will be terminated in racks. The Government will provide the rack space and termination cabinets.

The contractor is responsible for providing all termination supplies and materials. All fiber connectors shall be LC APC splice on connectors equal to AFL Part #FUSE-LC9SMA-6. The cabinets that the Government will provide are OCC cabinets, and the contractor will be responsible for providing 6 pack LC coupler plates to install in these cabinets. (6 Pack LC APC Coupler plate is OCC Part # 616SMDLAPC)

40. The specifications SECTION 27 13 23.00 40; 2.1.3.9 Filling Compound states that the cables be Gel Filled. 2.1.3.12 Metallic Armor states that the cable be armored. In order to reduce costs, can non- armored or gel-free cables be used? Corning's ALTOS cables are less expensive and are fully waterblocked loose tube, gel-free design providing simple access and no clean up. Corning provides cable that is Gel Free w/ water block in both armored and non-armored, Gel Filled cable in both armored and non-armored as well. Spec = Gel Filled and Armored; Proposed Alt= Gel Filled and Non-Armored; Proposed Alt= Gel Free and Non-Armored; Proposed Alt= Gel Free and Armored

NASA RESPONSE: Non armored cable is permitted. If a non armored cable or cable without metallic strength member is used, a separate piece of copper wire must be run with the fiber cable for locating purposes. Propose Corning Single Mode (OS2 Altos Loose Tube Gel Free Cable), or equivalent cable that meets or exceeds the performance specifications. Corning Single Mode specifications is provided named - ALTOS All Dielectric Gel Free SPECS, and can also be found here: [http://catalog.corning.com/opcomm/en-US/catalog/ProductDetails.aspx?cid=loose\\_tube\\_outdoor\\_cables\\_web&pid=8899&vid=8935](http://catalog.corning.com/opcomm/en-US/catalog/ProductDetails.aspx?cid=loose_tube_outdoor_cables_web&pid=8899&vid=8935)

41. According to the fiber splice schedule and the single line diagram for fiber optic cables, there are several buildings that do not appear on the drawings and those that are shown do not indicate where the fiber cable is to be terminated. Please provide updated drawings with all building locations in which fiber optic cable is to be installed. Please provide LAN Closet Room locations for each building so that cable measurements can be done so a quote can be provided.

**NASA RESPONSE:** The contractor is required to make terminations in buildings X-75 and V-62. Fiber to the remaining buildings shall end in the appropriate hand hole for each building with slack lengths as detailed in Attachment J, Communications - Fiber Optic Splice Schedule Rev A. Maps with hand hole locations and slack lengths titled - NORTH ISLAND HANDHOLE AND SPLICES is incorporated as Attachment K via Amendment 2.

42. The details on drawing UD2 (16907) shows a “fabricated composite concrete box pad” being used as the ground sleeve on the primary junctions. The typical sleeve provided by the manufacturers are fiberglass or steel. Would it be acceptable to use a fiberglass sleeve with this installation?

**NASA RESPONSE:** It is not acceptable to use a fiberglass sleeve with this installation due to the corrosive environment.

43. Confirm campus system voltage and system type (4-wire wye, 3-wire wye, 3-wire delta)

**NASA RESPONSE:** 3-wire grounded wye

44. Drawing 16910 requires a NEMA 6P low voltage control enclosure which is outdoor and submersible at 7' for 24 hours. Please confirm this is a requirement.

**NASA RESPONSE:** Confirmed. This is the requirement.

45. Specification section 26 13 00.00 20, page 4, paragraph 2.1.2 states that each switched way shall have three position switch open/close/ground. Drawing 16910 indicates two position open/close switch is required. Drawing 16912, switchgear schedule indicates G&W RPI42 switchgear is required which provides two position switches. Please clarify requirement.

**NASA RESPONSE:** For contractor supplied switchgear, the contractor shall provide a three position switch open/close/ground. Attachment N incorporated via Amendment 2 provides a revised Equipment Schedule.

46. Specification section 26 13 00.00 20, page 5, paragraph 2.1.4 states a 0-600 trip range is required, drawing 16310 states 30-600 trip range is required. Please clarify.

**NASA RESPONSE:** 0-600 trip range is required.

47. Specification section 26 13 00.00 20, page 5, paragraph 2.1.4 states the electronic over current control shall have EIA-RS-485 communication port that supports modbus and DNP3. Drawing 16310 state that G&W type 1 over current control is required which does not support modbus and DNP3.

**NASA RESPONSE:** The proposed overcurrent control system must comply as stated in Specification section 26 13 00.00.

48. Drawing number 16870, PCP-4 indicates that 2 – 600amp 4 way gas switches be installed at G/S W-040 location, the switchgear schedule on drawing number 16912, UD-7 does not indicate 2 switches are required at this location, please clarity.

**NASA RESPONSE:** There is only one piece of switchgear to be installed at this location. The 2- 600 note on PCP-4 is a mistake and should read 1-600A primary 4-way gas switch. Attachment N incorporated via Amendment 2 provides a revised Equipment Schedule.

49. Drawing number 16870, PCP-4 indicates that transformer W-50 is to be installed and connected to G/S W-040 switch, the transformer schedule on drawing number 16912, UD-7 does not indicate this transformer is to be provided. Please clarify.

**NASA RESPONSE:** Correct the transformer is missing on sheet PE-4. The transformer is to be installed as shown on PCP-4. Attachment N incorporated via Amendment 2 provides a revised Equipment Schedule.

50. Drawing no 16912 UD-5, listed all manual switch but then switch gear G/S WI 16A and 16B is automated. Please clarify if you need 5 manual switchgears and 2 automatic switchgears.

**NASA RESPONSE:** Two automated switchgear at locations 16 and 16B are required. Five manual pieces of switchgear are required by contractor. The rest are government supplied from material stock.

51. I am trying to download Attachment B – Submittal Documents for this project but the file is large and takes forever download. When I finally get it downloaded it says that the file is corrupt and won't open. I have tried this a couple of times and keep getting the same results. It looks like the file was scanned in. Is there any way to get the original pdf posted or a new uncorrupted file.

**NASA RESPONSE:** No issue observed. Please refer to question 2 posted on September 26, 2014.

52. What are the power requirements for the temporary services for critical buildings to be shut down at change over?

**NASA RESPONSE:** Providing uninterruptable power is not a requirement for this project. Mission critical facilities have UPS and fixed generators. Outage coordination shall be scheduled and communicated to both the Construction Manager, and the building occupants to minimize outage impact to building operations.

53. We have identified a discrepancy in the bidding documents, \*\*\* POL 1-4 The one line, indicates North East circuit requiring 41 sectionalizing cabinets and the North West circuits requiring 41 sectionalizing cabinets. \*\*\* Totaling (82) PJE 4-way 3 phase 600 amp sectionalizes\*\*\* \*\*\*Totaling (3) PJE 4-way 3 phase 200 amp\*\*\* For a grand total of 85 new sectionalizers. DWGS PCP1-PCP18 Electrical Conduit schedule, indicates that the entirety of the project only requires 44 sectionalizers in the total project. There is a major quantity issue for the Sectionalizers, please identify if the one-line is correct or if the electrical conduit schedule is correct.

**NASA RESPONSE:** Each PJ symbol on drawings PCP1-PCP18 represent one Primary Junction Enclosure with coincides with the electrical conduit plan. The callouts on the electrical conduit plan correlates to the single line labels for the Primary Junction Enclosures.

54. Drawing UD-7 indicates we are to install Fiber Cable into the LAN Closets of multiple buildings. There are no detail drawings to indicate how we are to install these cable. Drawings PCP 1-18 and PEP 1-18 only indicate Fiber Cable to the Hand holes as indicated. Please provide Drawings and Details on how we are to get the Fiber Cable from the Hand Hole to the LAN Closets as indicated on Drawing UD-7.

**NASA RESPONSE:** The contractor is required to make terminations in buildings X-75 and V-62. Fiber to the remaining buildings shall end in the appropriate hand hole for each building with slack lengths as detailed in Attachment J - Communications - Fiber Optic Splice Schedule Rev A. Maps with hand hole locations and slack lengths

titled - NORTH ISLAND HANDHOLE AND SPLICES is incorporated as Attachment K via Amendment 2.

55. In spec section H page 38 conflicts with drawing GN-1 notes 19 and 21-will we be able to stockpile the material from the boring?

NASA RESPONSE: See response to Question 18.

56. Can you clarify the fiber requirements for the locations of the terminations in the buildings, length of runs inside of buildings, any new equipment required in the buildings.

NASA RESPONSE: The contractor is required to make terminations in buildings X-75 and V-62. Fiber to the remaining buildings shall end in the appropriate hand hole for each building with slack lengths as detailed in Attachment J - Communications - Fiber Optic Splice Schedule Rev A. Maps with hand hole locations and slack lengths titled - NORTH ISLAND HANDHOLE AND SPLICES is incorporated as Attachment K via Amendment 2. Rack space and termination cabinets will be provided by the government. Regarding equipment - the contractor is responsible for providing all termination supplies and materials. All fiber connectors shall be LC APC splice on connectors equal to AFL Part #FUSE-LC9SMA-6. The cabinets that the Government will provide are OCC cabinets, and the contractor will be responsible for providing 6 pack LC coupler plates to install in these cabinets. (6 Pack LC APC Coupler plate is OCC Part # 616SMDLAPC).

57. What do you require for cable racking in electrical Mh's and com. Mh's. On drawing UD-1 they are only showing 1 stanchion and 3 arms.

NASA RESPONSE: Bid as shown on drawing UD-1.

58. SF6 Gas switches – Are all switches supposed to Automatic Source Transfer or just Switches 16A and 16B?

NASA RESPONSE: Two automated switchgear at locations 16A and 16B are required. Five manual pieces of switchgear are required by contractor. The rest are government supplied from material stock.

59. There is nothing in the spec on the control power for the power operated switches are these to be provided in the switch tank or externally? Are these switches to be connected to the SCADA system as specified in Section 2.1.5 of 26 13 00.00 20?

NASA RESPONSE: UD-5 calls out “additional equipment notes” for G/S WI-16A and G/S WI-16B. These switches should have SEL 451 relays powered from an internal PT (see note 2) which is offered by the switch manufacturer. Contractor should provide the SEL 2725 for each switch (see note 4). This network switch will convert fiber to copper to allow connectivity between each SEL-451 relay and the Wallops Relay Network. NASA will provide a dedicated fiber optic circuit to each switch which will allow for remote control and relay programming. The Contractor is responsible for items identified on UD-5 for G/S 16A and 16B to make the connection to the Wallops Relay Network. Once installed, NASA will make the final configuration to the SEL-451 and SEL 2725 to connect to the network.

60. As far we know there is not a SCADA system connected to the existing switches or there already. Are the power operated switches connecting to a SCADA system or are they to be stand-alone units?

NASA RESPONSE: G/S 16A and 16B will be the first two remote controlled gas switches to be placed on the Wallops Relay Network. The goal is to enable remote control and remote relay access from U-12 and X-141 using SEL software on workstations that are already in place.

61. The G&W switches proposed do not meet the specification 26 13 00.00 20 as they do not provide a Ground position. Are switches to meet UFGS 26 13 00.00 20 which is the standard for these switches or not?

NASA RESPONSE: For contractor supplied switchgear, the contractor shall provide a three position switch open/close/ground.

62. How long is the MEC training and is there any cost?

NASA RESPONSE: The MEC is the Management Education Center. There is no NASA training course required for this project.

63. Is there a schedule available for launches and other activities that will effect contractor and subcontractor work?

NASA RESPONSE: See response to Question 6.

64. Directional boring spoils- can we silt fence an area to temporarily store spoils to dry out and re-use as fill?

NASA RESPONSE: See response to Question 18.

65. Dig permits required?

**NASA RESPONSE:** Dig permits will be required.

66. Who is responsible to locate and mark the existing utilities?

**NASA RESPONSE:** Utility markouts are made with the government as part of the dig permit process.

67. Drawing PE-2 shows a COM line at the bottom left of the page going up to a triangle building. This building is not identified and the call out for the COM cable is off of the page. Please inform as to what type cable is.

**NASA RESPONSE:** The callout shown was intended for both cable runs. The switch will have the capability to be feed from either medium voltage feeder.

68. Is the North Island Electrical Distribution Upgrades Wallops Island project tax exempt?

**NASA RESPONSE:** In accordance with FAR clause 52.229-3, the project is not tax exempt.

69. Which page of the solicitation is Exhibit 1 located?

**NASA RESPONSE:** Exhibit 1 is located on page 4.

70. The current spec (SECTION 27 13 23.00 40; 2.4 SPLICE ORGANIZERS) calls out to "Fill space between the inner and outer closures with encapsulating fluid. Factory drill end plates to fit the cable(s) outer diameter." This is an old spec and these type closure are no longer manufactured for fiber. The current closures do not offer encapsulating fluid nor factory drilled end plates. The new designs are pressurized splice cases which allow reentry without damaging the cables and protects from water and weather. The new end caps are redesigned to seal around the cables with field installed grommets.

**NASA RESPONSE:** Offerors shall provide splice cases equal to PreFormed Line Products (PLP) Coyote Fiber Optic Closure COYD919B-000.

71. During a review of the drawings there appears to be a discrepancies concerning the number of 112.5KVA Pad Mount Transformers to be installed. Drawing POL-2 indicate the Following Transformers TRW-40, and TRW-50. Drawing PCP-4

indicates to install TRW-40 and TRW-50. Drawing PEP-4 only indicates terminating conductors into TRW-40. TRW-50 is not indicated on this drawing. UD-7 only indicates 2 new 112.5KVA Pad Mount Transformers to be installed, TRW-10 and TRW-40. Please advise if we are to provide and install TRW-50 as indicated on Drawing PCP-4.

**NASA RESPONSE:** The transformer is missing on sheet PE-4. The transformer is to be installed as shown on PCP-4.

72. Drawing UD-7 on the transformer schedule shows TR W-010 and TR W-40 and on drawing PCP-4 they are showing transformers TR W-50 and TR W-40 and drawing PCP-3 is showing TR W-010

**NASA RESPONSE:** The transformer TRW-50 is to be installed as shown on PCP-4. Attachment N incorporated via Amendment 2 provides a revised Equipment Schedule.

73. On drawing UD-2 details 1, 2, and 4 they are showing a minimum depth of 42" or it will have to be concrete incased , on drawing UD-3 details 3, 4, and 5 are showing 48"- please clarify

**NASA RESPONSE:** The purpose of the concrete encasement is for any situations in which directional bore and equipment transitions do not meet burial depths of 42" requirements for this project. Concrete encasement will be provided by the contractor on an as needed basis for areas in which conduit and cable are not below 42" for this particular project as indicated on UD-2.

74. There are (3) Specifications that reference SF6 switches 33 77 19.00 40, 33 70 02.00 10 and 26 13 00.00 20 and they do not match in ratings or protection. Which are we to comply too?

**NASA RESPONSE:** Comply to Specification 33 70 02.00 10.

75. If all or any to be automatic which ways are to be motor operated?

**NASA RESPONSE:** Both incoming feeds shall be motorized.

76. More clarification is needed on the SF6 switches are the drawings are very difficult to read and understand.

**NASA RESPONSE:** SF6 switch information is provided in the schedule. Attachment N incorporated via Amendment 2 provides a revised Equipment Schedule.

77. POL-2 shows Switches 16A & 16B as three way switches with no protected ways and UD-7 calls for a 4 way switch with (2) protected ways. Which is correct? Which ways are supposed to be motor operated?

NASA RESPONSE: On switch 16A and 16B referring to POL-2 one six hundred position will tie the two switches together with a normally open point. Two incoming feeds shall be motor operated. The SEL protection in the drawing sets are protecting the switchgear outgoing feeds.

78. How are these two switches to work together. This is not spelled out anywhere?

NASA RESPONSE: On switch 16A and 16B referring to POL-2 one six hundred position will tie the two switches together with a normally open point.

79. POL-1 shows Switch 075 as a 4way with only one protected way and UD-7 calls out for (2) protected ways. Which is correct?

NASA RESPONSE: Proposed One Line Diagrams were given for connectivity. A 2 way protected switch is required. One way will be a spare.

80. Alternate communication conduits, can they be bored and pulled together with the electric conduits?

NASA RESPONSE: Communication and electrical conduits should be pulled separately to provide spacing between electric and communication circuits.

81. Will there be any UXO or hazard areas that would need swept, if so at whose cost?

NASA RESPONSE: UXO boundaries adjacent to the bore route is provided in Attachment M, an abbreviated UXO training presentation. UXO hazard areas are clearly marked, and the bore route is not within the UXO placarded safety area. Any sweeping for UXO will be at the cost of the contractor.

82. Spec for pipe?

NASA RESPONSE: All conduits to be HDPE conduit.

83. Page PCP 1 drawing 16867 is there a misprint for 466' of 2-4" for communication, showing 612' of 2-4"?

NASA RESPONSE: PCP-1 drawing 16867 is correct. 265' of 2-4" for electric runs between junctions 1 and junctions 2. 612' of 2-4" are for communication runs between manholes.

84. Page PCP 3 drawing 16869 communication line between 2 new manhole right side of page crossing Island Road, is it existing or new? If new how many conduits and footage?

**NASA RESPONSE:** The conduit and fiber are new. Install one four inch conduit 210 feet.

85. Page PCP 4 drawing 16870 same issue as question 84 only 2 locations?

**NASA RESPONSE:** At Building W-22 install one four inch conduit 108 feet. At Building W-40 install one four inch conduit 207 feet.

86. Page PCP 5 drawing 16871 between new manholes how many conduits?

**NASA RESPONSE:** Install one four inch conduit.

87. Page PCP 15 drawing 16881 Island Road how many conduits for road crossing for communication? How many conduits between Junction box and V65?

**NASA RESPONSE:** Install one four inch conduit.

88. IN SPEC SECTION 33 05 23.13 PAGE 22 PARAGRAPH 2.12.2 it states that the grounding conductor installed in conduit with associated phase conductors shall be insulated and green color coated. The PE drawings are showing 4/0 bare cu. Which is the correct wire?

**NASA RESPONSE:** The 33 05 23.13 is a directional boring spec and does not have conductor in the spec.